

**Gulf Oil Limited Partnership
Cumberland County
South Portland, Maine
A-390-71-D-R**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Gulf Oil Limited Partnership (Gulf) of South Portland, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their petroleum storage and distribution facility.

B. Emission Equipment

Gulf is licensed to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	25.5	170.0	#2 or #6 fuel oil, 1.5%	1
Boiler #2	12.0	80.0	#2 or #6 fuel oil, 1.5%	2

Petroleum Storage

<u>Tank</u>	<u>Capacity (Gallons)</u>	<u>Current Product Stored</u>	<u>Roof Type</u>	<u>Date Installed</u>
D1	4,062,198	distillate/residual	Fixed	1950
D2	4,061,694	distillate/residual	Fixed	1950
D3	4,048,044	gasoline/distillate/residual	Internal Floating	1950
D4	2,243,094	distillate/residual	Fixed	1950
D5	4,062,870	distillate/residual	Fixed	1950
D6	4,062,660	distillate/residual	Fixed	1950
D7	3,404,016	gasoline/distillate/residual	Internal Floating	1953
D8	6,346,746	gasoline/distillate/residual	Internal Floating	1954
D9	841,638	gasoline/distillate/residual	Internal Floating	1959

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>
Loading Rack	7,600 gal/min	Vapor Recovery Unit

C. Application Classification

The application for Gulf does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers

Gulf operates two fuel oil fired boilers for facility and tank heating needs. Boiler #1 has a maximum heat input of 25.5 MMBtu/hr and Boiler #2 has a maximum heat input of 12.0 MMBtu/hr.

Boilers #1 and #2 were installed in 1972 and 1973 respectively. Therefore, Boilers #1 and #2 are not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Boilers #1 and #2 are also not subject to NSPS Subpart D for fossil-fuel-fired steam generating units constructed after 1971 with heat inputs greater than 250 MMBtu/hr.

A summary of the BPT analysis for Boiler #1 and Boiler #2 is the following:

1. The total fuel use for the facility shall not exceed 424,000 gal/year of #2 or #6 fuel oil combined, based on a 12 month rolling total, with a maximum sulfur content not to exceed 1.5% by weight.
2. Chapter 106 regulates fuel sulfur content.
3. Chapter 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
4. NO_x emission limits are based on data from similar #6 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from the boilers shall not exceed 30% opacity on a 6-minute block average, except for no more than 2 six-minute block averages in a continuous 3-hour period.

C. Vapor Recovery Unit

Gulf operates a truck loading rack equipped with bottom loading and controlled by a rebuilt McGill Carbon Adsorption/Absorption Vapor Recovery Unit (VRU) to capture Volatile Organic Compounds (VOCs). It was installed in 1995. The VRU controls emissions to less than 10 milligrams per liter of product loaded.

Gulf is also licensed to transfer up to 10 MMgal/year of distillate through top loading. Fugitive emissions from this process are calculated to be less than 1 ton/yr of VOCs. Additional control for the top loading of distillate is not required at this time.

D. Distillate Storage Tanks

Gulf currently operates five tanks with fixed roofs capable of storing petroleum products. Each of these tanks varies in throughput depending on the demand for distillates throughout the year.

E. Gasoline Storage Tanks

Gulf operates four tanks with internal floating roofs capable of storing gasoline or other petroleum products. Tanks D3, D7, D8, and D9 shall be equipped, maintained and operated such that:

1. there is an internal floating roof with closure seal(s) between the roof edge and the tank wall and these are maintained so as to prevent vapor leakage,
2. the internal floating roof and the closure seal(s) will be maintained such that there are no holes, tears, or other openings in the seal or between the seal and the floating roof,
3. all storage tank openings, except stub drains, are equipped with covers, lids or seals which remain closed at all times,
4. all automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports,
5. all rim vents, if provided, are to be set to open only when the roof is being floated off the leg supports or at the manufacturers recommended setting,
6. if any holes, tears, or other openings are present the source shall make repairs as soon as practical, but no later than 15 calendar days with the first attempt at repair to be made no later than 5 days from the initial detection of the leak.

F. NSPS

Tanks D1 through D9 were all installed prior to 1973 and are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart K, Ka, and Kb for Storage Vessels for Petroleum Liquids manufactured after June 11, 1973, with capacities greater than 40,000 gallons.

G. VOC RACT

Gulf is in an attainment area for all U.S. EPA designated criteria air pollutants except ozone, for which Cumberland County is designated as moderate nonattainment. Maine is currently part of the Ozone Transport Region (OTR), and thus, the entire State of Maine is subject to the nonattainment requirements for ozone. Chapter 134 of the Maine Air Regulations requires facilities that have the potential to emit forty (40) tons or more of VOC per calendar year apply VOC

RACT (Reasonable Available Control Technology) to their applicable VOC emissions.

In accordance with MEDEP Chapter 134 Section 3(A)(1), Option A, the owner or operator must install and operate a system to capture and control VOC emissions such that the total VOC emissions do not exceed, on a daily basis, fifteen (15) percent of the uncontrolled daily VOC emissions. Gulf's use of cone internal floating roofs for gasoline storage tanks and a vapor recovery system that is rated at 10 mg/liter of product loaded meets the requirements of Chapter 134 by controlling VOC emissions such that VOC emissions do not exceed, on a daily basis, fifteen (15) percent of the uncontrolled daily VOC emissions.

H. Annual Emission Restrictions

Gulf shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	6.4
PM ₁₀	6.4
SO ₂	47.7
NO _x	14.3
CO	1.1
VOC	49.9
single HAP	9.9
total HAP	24.9

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the above total facility emissions, Gulf is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-390-71-D-R subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (16) Boilers
- A. Total fuel use for the boilers shall not exceed 424,000 gal/yr of #2 and #6 fuel oil combined with a maximum sulfur content not to exceed 1.5% by weight. Compliance shall be based on fuel records showing the quantity of fuel fired and the percent sulfur of the fuel. Records of annual fuel use shall be kept on a 12-month rolling total basis.
- B. Emissions shall not exceed the following:

Equipment		PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler #1	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	5.10	5.10	38.25	11.48	0.85	0.05
Boiler #2	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	2.40	2.40	18.00	5.40	0.40	0.02

- C. Visible emissions from Boilers #1 and #2 shall each not exceed 30% opacity on a 6-minute block average, except for no more than 2 six-minute block averages in a continuous 3-hour period.
- (17) All gasoline storage tanks shall be equipped, maintained, and operated such that:
- A. There is an internal floating roof with closure seal(s) between the roof edge and the tank wall and these are maintained so as to prevent vapor leakage;
- B. The internal floating roof and closure seal(s) will be maintained such that there are no holes, tears, or other openings in the seal or between the seal and the floating roof;
- C. All storage tank openings, except stub drains, are equipped with covers, lids or seals which remain closed at all times;

- D. All automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
 - E. All rim vents, if provided, are to be set to open only when the roof is being floated off leg supports or at the manufacturers recommended setting;
 - F. If any holes, tears or other openings are present the Department shall be notified within 10 days of discovery of such holes, tears, or openings and of the course of action to be taken for repair. EMOC shall demonstrate to the Department that the repairs were made as soon as practicable.
- (18) Gulf shall comply with the following source inspection requirements:
- A. Routine inspections of floating roofs are conducted through roof hatches once every month.
 - B. A complete inspection of the cover and seal is to be performed at least once every ten years and each time the vessel is emptied and degassed. These inspections shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seals and may be conducted entirely from the top side of the floating roof as long as there is visual access to all deck components.
 - C. Between January 1, 2000 and December 31, 2003, Gulf shall notify the Department at least seventy two (72) hours in advance of emptying and degassing any storage tank and shall not empty and degas any storage tank for the purpose of performing a complete inspection on any day for which the Department has issued an ozone health warning pursuant to 38 M.R.S.A. § 584-F.
 - D. Beginning January 1, 2004, Gulf shall not empty and degas any storage tank for the purpose of performing a complete inspection between June 1 and August 31 of each calendar year.
- (19) The following records shall be maintained for a period of six years at the source and available for inspection by the Department:
- A. Inspection log shall be kept documenting each inspection any detected leaks, holes, tears, or other openings and the corrective action taken to demonstrate compliance with Condition (17).
 - B. Monthly throughput specifying quantity and types of volatile petroleum liquids in each tank and the period of storage.
 - C. Calculations showing annual VOC emissions from equipment seals, and transfer piping and fittings determined in accordance with American Petroleum Institute, Manual of Petroleum Measurement Standard, Chapter 19, Section 2, Evaporative Loss from Floating Roof Tanks (method of calculating VOC emissions from tanks).
 - D. Average monthly product storage temperatures and maximum true vapor pressures or Reid vapor pressures of volatile petroleum liquids stored.

- (20) The bulk gasoline terminal shall be equipped, maintained and operated with a carbon adsorption system, which captures displaced VOC vapors whenever gasoline is being transferred or gasoline vapor is displaced from a tank truck.
- (21) All loading and vapor lines shall be equipped and maintained in good working order such that vapor tight fittings close automatically when disconnected and the pressure in the vapor collection system shall not be allowed to exceed +18 inches of water or a vacuum exceeding -6 inches of water. Pressure gauges shall be maintained to document compliance with this limit.
- (22) Gasoline loading shall be allowed only into tank trucks and trailers which have been properly certified pursuant to 40 CFR Part 60 Appendix A, Method 27 and maintained and labeled as vapor-tight in accordance with Maine Air Regulations Chapter 120.
- (23) Any tank truck carrying gasoline or which has carried gasoline as the most recent previous load shall utilize the vapor collection system during the entire loading process.
- (24) Gulf shall prevent VOC emissions from exceeding 100% of the lower explosive limit (LEL) obtained within one inch around any potential leak source of the tank truck, including all loading couplings, vapor lines and fittings employed in the transfer of gasoline.
- (25) VOC emissions from the carbon adsorption system shall not exceed 10 milligrams of VOC per liter of product transferred.
- (26) Gulf shall conduct an annual compliance test of the vapor recovery unit prior to May 15th of each year beginning in the year 2003. A report containing the test results shall be submitted to the Department within 30 days of the completion of test in accordance with the Department's stack test protocol.
- (27) Gulf shall not exceed the following petroleum product throughput at the loading rack (based on a 12-month rolling total). Compliance shall be documented through records kept per Condition (19)(B).
 - 1. gasoline: 330,000,000 gallons
 - 2. distillate 310,000,000 gallons
 - 3. JP-8/Kerosene: 150,000,000 gallons
- (28) Gulf shall not exceed a process rate to the Loading Rack Vapor Recovery Unit of 7,600 gal/min.

(29) Emission Limits

- A. Gulf shall not exceed a facility wide emission limit of 49.9 tons per year of VOC based on a 12 month rolling total.
- B. Gulf shall not exceed a facility wide emission limit of 9.9 tons per year of any single HAP or 24.9 tons per year for all HAPs combined, each based on a 12 month rolling total.

(30) Gulf shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

(31) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;
- or
- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

The emission statement must be submitted by September 1.

(32) **Toxic Air Pollutants Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall report, no later than September 1, every two years (1996,1998,etc.) or in a timeframe designated by the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

- (33) Gulf shall pay the annual air emission license fee within 30 days of December 31st of each year. Pursuant to 38 M.R.S.A. Section 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 M.R.S.A. Section 341-D, Subsection 3.
- (34) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/29/93

Date of application acceptance: 10/7/93

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.